

REMARKS

The application has been reviewed in light of the Office Action dated September 19, 2005. Claims 1-30 are pending, with claims 1, 10, 19, 28 and 29 being in independent form. By this Amendment, claims 1, 10, 19, 28 and 29 have been amended to clarify the claimed invention. Support for the claim amendments can be found in the application in Figs. 1, 8 and 11, and corresponding discussions in the specification.

The specification was objected to. The Office Action states that essential material cannot be incorporated by reference in the specification.

Applicant maintains that the pending claims are fully supported by the specification, without reference to Japanese patent application No. JPAP2001-035257. Stated another way, no essential material supporting the present claims is missing from the specification, and therefore no amendment of the specification is necessary.

Accordingly, withdrawal of the objection to the specification is requested.

Claims 1, 2, 5, 6, 8-11, 14, 15, 17-20, 23, 24 and 26-30 were rejected under 35 U.S.C. §103(a) as purportedly unpatentable over U.S. Patent No. 4,536,839 to Shah in view of U.S. Patent No. 6,073,132 to Gehman. Claims 3, 4, 7, 12, 13, 16, 21, 22 and 25 were rejected under 35 U.S.C. §103(a) as purportedly obvious over Shah and Gehman, in view of U.S. Patent No. 6,708,248 to Garrett.

Applicant has carefully considered the Examiner's comments and the cited art, and respectfully submits that independent claims 1, 10, 19, 28 and 29 as amended are patentable over the cited art, for at least the following reasons.

This application is directed to arbitration of bus access requests. The present application provides for improved bus arbitration schemes, wherein when two or more requests for access to the bus are received at approximately the same time, one of a plurality of stored selection signals

is selected, and the selected selection signal is used to place the requests in order of decreasing priority (for example, without rejecting any of the requests).

For example, independent claim 1 is directed to a bus arbitration apparatus comprising a storage, a priority order determiner and an arbitrator. The storage stores a plurality of selection signals for specifying a priority order against a number N of requests for use of a bus. The priority order determiner cause the storage to output one of the plurality of selection signals in a predetermined sequence in response to a demand for arbitration. The selection signal output from the storage places the requests in order of decreasing priority.

Shah, as understood by Applicant, is directed to a memory request arbitrator, in a multiprocessor system, for selecting one of plural microprocessors requesting access to a memory device. The memory request arbitrator includes a read only memory for storing a plurality of selection signals. However, each selection signal output from the read only memory selects one of the requests and rejects the other requests. That is, the selection signal chooses one of the requestors and the memory access request of the chosen requestor will be granted, regardless of whether any other requestors are requesting memory access (see Shah, column 5, lines 40-46).

Applicant does not find teaching or suggestion in Shah, however, that the selection signal output from storage places the requests in order of decreasing priority, as provided by amended claim 1.

Gehman, as understood by Applicant, discloses arbitration of requests for access to a system bus. Gehman discloses an arbiter which operates according to a state machine (Fig. 4 of Gehman).

Applicant does not find disclosure or suggestion in Gehman, however, of a bus arbitration apparatus comprising a storage and a priority order determiner, wherein the storage stores a plurality of selection signals for specifying a priority order against a number N of requests for use

of a bus, the priority order determiner cause the storage to output one of the plurality of selection signals in a predetermined sequence in response to a demand for arbitration, and the selection signal output from storage places the requests in order of decreasing priority, as provided by amended claim 1.

Garrett, as understood by Applicant, is directed to a memory system with channel multiplexing of multiple memory devices. Garrett was cited in the Office Action as purportedly disclosing use of non-volatile storage.

Applicant does not find disclosure or suggestion in the cited art, however, of a bus arbitration apparatus comprising a storage and a priority order determiner, wherein the storage stores a plurality of selection signals for specifying a priority order against a number N of requests for use of a bus, the priority order determiner cause the storage to output one of the plurality of selection signals in a predetermined sequence in response to a demand for arbitration, and the selection signal output from storage places the requests in order of decreasing priority, as provided by amended claim 1.

Independent claims 10, 19, 28 and 29 are patentably distinct from the cited art for at least similar reasons.

Accordingly, for at least the above-stated reasons, Applicant respectfully submits that independent claims 1, 10, 19, 28 and 29, and the claims depending therefrom, are patentable over the cited art.

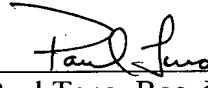
In view of the amendments to the claims and remarks hereinabove, Applicant submits that the application is now in condition for allowance, and earnestly solicits the allowance of the application.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Office is hereby authorized to charge any fees

that may be required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul Teng", is written over a horizontal line.

Paul Teng, Reg. No. 40,837
Attorney for Applicant
Cooper & Dunham LLP
Tel.: (212) 278-0400